Instructor: Andrea Tamburelli **Time:** MWF 2:45-3:40 pm
Zoom link: Meeting ID:919 3022 4810 **Email:** at52@rice.edu

Office Hours: Office hours will be held by appointment via zoom at the following link (Meeting ID:463 894 2882).

Textbook: No textbook is required. Lecture notes will be provided.

Course outline: Lie groups are some of the richest objects in mathematics, possessing both algebraic structure (a group structure) and geometric structure (a smooth structure), which interact via thesimple requirement that group operations are smooth. A large sub-class of the abstract Lie groups are the matrix Lie groups, which will be the main objects of consideration in this course. By restricting ourselves to matrix groups, we will be able to develop some of the main ideas from the general Lie theory in a context that is more accessible.

Homework: Homework is due every week on **Friday** by 11:59pm. On certain weeks, we cannot have homework due on Friday (because Thursday or Friday will be a sprinkle day). In that case, homework will be due on the following Monday by 11:59pm. Homework is a key part of the course and no late assignments will be accepted for any reason. However, the 3 lowest homework grades will be dropped. Homework is not pledged and you are encouraged to collaborate with other students in the class. However, your solutions must be written up individually.

Grading: Grades will be based on homework and exams following the grading scheme below

Homework:	20 %
Midterm:	35 %
Final exam:	45 %

Important dates: First day of classes: January 25th
Midterm: March 10th (online)
Last day of classes: April 30th
Final: TBA (online)

Title IX Responsible Employee Notification: Rice University cares about your wellbeing and safety. Rice encourages any student who has experienced an incident of harassment, pregnancy discrimination or gender discrimination or relationship, sexual, or other forms interpersonal violence to seek support through The SAFE Office. Students should be aware when seeking support on campus that most employees, including myself, as the instructor/TA, are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. For more information, please visit safe.rice.edu or email titleixsupport@rice.edu.

Collegiality and Respect: The Department of Mathematics supports an inclusive learning environment where diversity and individual differences are understood, respected, and recognized as a source of strength. Racism, discrimination, harassment, and bullying will not be tolerated. We expect all participants in mathematics courses (students and faculty alike) to treat each other with courtesy and respect, and to adhere to the mathematics department standards of collegiality, respect, and sensitivity as well as the Rice Student Code of Conduct. If you think you have experienced or witnessed unprofessional or antagonistic behavior, then the matter should be brought to the attention

of the instructor and/or department chair. The Ombudsperson is also available as an intermediate, informal option, and contacting them will not necessarily trigger a formal inquiry.

Disability Support: If you have a documented disability that may affect academic performance, you should: 1) make sure this documentation is on file with Disability Resource Center (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) contact me to discuss your accommodation needs and provide me with a copy of your Accommodation Letter.

Online sources: The service *Canvas* will be used for this course. Announcements, coursework, etc. will be posted there.